



The impact of financial risk management practices on financial performance of microfinance institutions in Indian division

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Abstract

The financial performance measures used were Return on Asset (ROA) and Return on Equity (ROE). The RMPs in question included risk identification, risk appraisal, risk control, risk monitoring and often practiced risk management. A five likert scale questionnaire with closedended questions were administered to seven selected MFIs. The results showed that risk identification have a positive and significant effect on the financial performance of MFIs in Ndian Division while risk control and risk monitoring are found to have a negative and an insignificant effect on the financial performance of MFIs in Ndian Division. The overall result revealed that financial risk management practices have a significant effect on the financial performance of MFIs in Ndian Division at 1% level of significant. Therefore, we conclude that risk management practices have a significant effect on the financial performance of MFIs in Ndian Division. We recommend that MFI in Ndian Division should implement comprehensive risk management policies and procedures to mitigate identified risks like credit risk and liquidity risk management.

Keywords: Financial Institutions, return on assets, return on equity, risk management.

Introduction

Risk according to Sparta (2022) ^[24] is anything that can make achieving certain goals more difficult. A positive or negative deviation from anticipated results may result from the influence on corporate objectives. While a negative variation makes it challenging to reach the established business goals, a positive variance aids the firm in reaching its anticipated business goals. All financial institutions, including MFIs must proactively put in place measures to manage the risks to which they are exposed (Akinleye & Olanipekun, 2021). This ensures their continuation and sustainability. MFIs are subject to financial risks just like all other financial institutions. This is intimately tied to their primary business of managing credit accepting deposits. Therefore risk management is crucial for MFIs in order to maximize their return on investment (Shieler *et al.* 2017) ^[22]. Financial risk management is the process of foreseeing potential dangers, investigating them, and putting preventive measures in place to lessen the hazard. Although it has negative impacts, financial risk can be handled through particular procedures known as risk management procedures. Financial risk is created by both internal and external vulnerabilities. Priorities must be established in these procedures such that risks with lower loss are treated last and risks with the highest loss and greatest possibility of occurring are handled first.

Some efficiency related works estimates scope economies derived from the joint provision of microloans (Hartarska *et al.* 2011, 2013). Zamore *et al.* (2021) ^[26, 30] study for the first time the relationship between non-performing loans (NPLs) and cost efficiency using a worldwide sample of MFIs. Interestingly, the authors demonstrate the existence of a U-shaped relationship between inefficiency and NPLs rates in contrast to previous banking studies; suggesting that MFIs need to avoid an overemphasis on asset quality at the

expense of cost efficiency. However, Zamore *et al.* (2021) ^[30] focus on one specific aspect of financial risk management that is credit risks, while we provide a thorough assessment of a wide range of financial risk management indicators related to asset quality, solvency, capitalization, and liquidity risk. We used a cost function to capture efficiency and apply an approach employed in efficiency analyses of banks and financial institutions which also fits well with MFI sustainability goals.

The Cameroonian financial framework as with any other financial system in the world deals highly with risk in its day to day management. That is why the banking sector regulation in Cameroon has identified risk management as an important part in the management of financial institutions in Cameroon. Innovations in the financial industry has produced new markets and instruments and make it very easy for banks and their employees to make huge bets easily and quickly. Most micro finance institutions in Cameroon outline credit risk and liquidity risk as the two most important types of financial risk they face.

Many financial institutions in Cameroon handle this risk on a daily basis in order to grow and encounter rapid changes. Thereof, risks must be understood and carefully managed for a proper decision making in the Cameroonian financial system. Business today need to fully integrate sustainability and risk management into their strategy, not only to minimize potential losses but also to exploit new business opportunity arising for sustainability agenda (Webster 2009). According to Biker (2015) the ultimate objective of risk management implementation in connected organizations is to maintain proper financial performance and efficiency. Companies also manage financial risks so as to minimize the in stability of earnings or cash flows as a result of financial risk exposure. This enables companies to keep away from financial distress and the costs associated

with it (Dhanini, 2007). In addition, Bobakovia (2013)^[10, 26] argues that the competence of a firm relies on its capability to predict and mitigate risks, and possibility of provisions to cover losses brought about by risks that arises. Financial risk management system (FRMS) aids in the utilization using collateral management systems, behavioral detection and predictive analysis system, structured finance systems and risk management systems. Winfred (2013) therefore concludes that FRMS to most extent increases profitability and efficiency in the company's studies. According to McGoun (1995), our understanding of risk is important because it is a measure of our expectations. He argued that if we cannot measure risk, then we cannot measure the value of our asset. Unfortunately, our understanding of risk has been overshadowed by our risk appetite (Power,2002) as this in most cases is controlled by the choices and gambling habits of managers (Marcg & Shapira,1987). This has seen our risk appetite either expressed through society where regulators act to enforce the rule of law or through managers who act in the interest of the organization in pursuit of economic gains. This research sought to answer the research question so as to fill in the existent research gap; does a financial risk management practice influence financial performance of microfinance institutions in the south west region?

Review of literature

Wenk (2005) indicated that the Risk Management model consists of risk identification, risk assessment, and prioritization of risks followed by coordinated and economical application of resources to minimize, monitor, and control the probability and/or impact of unfortunate events or to maximize the realization of opportunities. Risks can come from uncertainty in financial markets, project failures, legal liabilities, credit risk, accidents, natural causes and disasters as well as deliberate attack from an adversary, or events of uncertain or unpredictable root-cause. Khizer, Muhammad and Sharma (2011) indicated that the first step in the risk management process is to identify risks and good quality information, as well as a comprehensive understanding of the microfinance institution and its internal and external environment, which are very crucial to identify the risks.

Return on Assets (ROA)

Al-Matari, Al-Swidi and Fadzil (2014)^[6] indicated that the most widely used performance measure in risk management literature in terms of accounting-related determinants is Return on Assets (ROA). This is estimated as the net income divided by total assets and is a pointer of short-term performance. $ROA = \text{Net Profit} / (\text{Beginning Total Assets} + \text{Ending Total Assets})/2$

Kenny *et al.* (2014)^[16] posit that ROA is an indicator that evaluates assets employed efficiency and conveys to investors the earnings that have been generated by funds that have been invested in capital assets. They further indicated that the efficient use of a company's assets is best depicted by the return rate on its assets. Al-Matari *et al.* (2014)^[6] stipulated that because a bank's management is accountable for the operations of the bank and utilization of the bank's assets, ROA is an indicator that permits investors to know how well the bank's risk management practices are functioning so far as improving the level to which the bank's management is running efficiently is concerned.

Return on Equity (ROE)

Al-Matari *et al.* (2014)^[6] Indicated that Return on Equity (ROE) is a profitability ratio measured by dividing net profit over shareholders' equity. It shows how well the MFI can use equity investments to earn profit for investors. $ROE = \text{NetProfit} / (\text{Beginning Equity} + \text{Ending Equity})/2$.

According to Vanroose and D'Espallier (2013), Return on Equity (ROE) is another major accountingrelated indicator of a company's performance which is employed in risk management studies. They further indicated that one of the key reasons why MFIs operate is to make profits to reward its shareholders; hence, ROE is an indicator that proves to shareholders, as well as other stakeholders, the earnings which they made from the money invested by the investors. Al-Matari *et al.* (2014)^[6] stipulated that ROE is depicted as having some restrictions and ROE is not risksensitive (for instance, the amount of risky assets and the solvency event is not captured in ROE figures) and it does not consider the company's long-term strategy or essential extra-ordinary components; hence, ROE is not an independent performance measure.

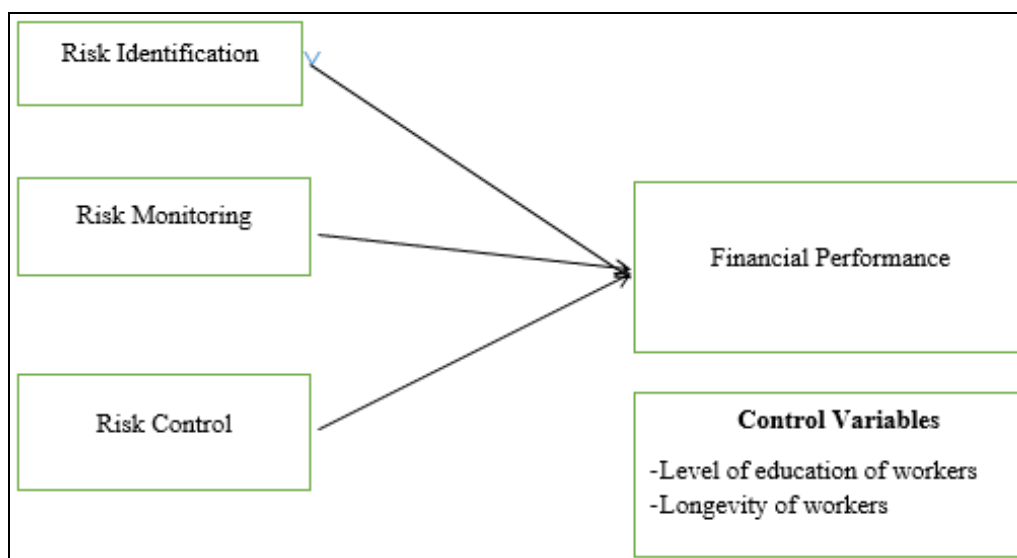


Fig 1: Conceptual framework

Agency theory depicts established associations in which the principal party determines the work while the agent does the work (Jensen & Meckling, 1976^[14]; Ross, 1973; Eisenhardt, 1989). It is very useful for governing, monitoring and controls in an organization. This theory helps management to assess the company capabilities and short falls, risk monitoring and identification. According to Smith and Stulz (1985)^[23] risk management could impact managerial behaviors towards risk taking and evading. Wamalwa & Mukanzi (2018)^[27] argued that agency theory expands the analysis of the company to involve separation of ownership and control, and managerial motivation. Kenny, Jumoke and Faderera (2014)^[16] indicated that the theory further clarifies a likely divergence of interest between shareholders, Management and debt holders as a result of asymmetries in the distribution of earnings which can lead to the company taking an unacceptable risk or not taking part in positive net value projects.

1.2 Stakeholder Theory

Sathyamoorthi, Mogotsinyana, Mphoeng and Mashoko (2020)^[21] argued that stakeholder theory, coined originally by Freeman (1984) as a managerial tool, has since grown into a model of the company with high explanatory potential. The stakeholder model concentrates clearly on equilibrium of stakeholder interests as the major factor of corporate policy. Klimczak (2005) argues that in some sectors, especially high-tech and services, consumer trust in the firm is capable to maintain its services in the future and significantly contribute to firm value. Nonetheless, the value of these indirect assertions is very sensitive to the anticipated costs of financial distress and bankruptcy since corporate risk management practices result in a reduction in these anticipated costs and firm value increases. Therefore, Judge (2006)^[15] argues that the stakeholder model gives a new understanding into probable motivation or basis for risk management, but it has not yet been examined directly and studies of financial distress give only indirect evidence.

1.3 Credit Management Theory

Credit management theory as proposed by Woolcock and Narayan (2000)^[29] states that the markets for credit or loans are highly shaped by the lenders (MFIs) strategically, for potential borrowers screened and their opportunistic behavior addressed which is encouraged by the nature of loan contracts. Accordingly, lenders usually increase credit pricing to a level that they expect returns to be maximized. This often excludes small, risky and costly borrowers. The consumption of credit tends to be inversely related to both the interest rates and the required collateral. Commercial banks tend to apply the credit management theory taking advantage of the opportunistic behavior presented by potential borrowers. Consumption of credit is collated to the collateral requirements and a variable interest rate pricing policy might be utilized by individual banks (Tanui, Wanyoike & Ngahu, 2015)^[25].

1.4 Theory of Information Asymmetry

Akerlof (1970)^[2] proposed the theory of Information asymmetry theory and argued that in markets, buyer usually use market statistic to determine the goods value. Therefore, the clients normally become aware of an average of an entire market whereas the seller is knowledgeable of a particular item. Akerlof's argument is that information

asymmetry gives the seller a greater opportunity to sell his/her products or services of less than the average market quality (Parrenas, 2005)^[20]. In this way, the average quality of a product or a service in a market may reduce as well as the market size. In this theory, relevant Information is often available for each agent but there is a strong information asymmetry between the managers and the investors of the firm (Akkizidis & Khandelwal, 2008)^[4]. This theory explains a condition where all parties in an undertaking are not aware of the available relevant information (Eppy, 2005). Stiglitz (2001)^[5] indicates competitive behavior in such markets involving inter temporal linkages. The theory points out two problems associated with the perceived information asymmetry for the financial institution. That is the adverse selection and moral hazard. The theory affirms that, if commercial banks can exchange their client's information especially on clients' creditworthiness it could result in higher aggregate lending and low default rates (Weinberg, 2006).

2. Empirical Review

Pagadala & Arif (2017) did research on practices of risk control on selected microfinance institutions in Telangana state in India. The research employed a survey technique. The paper concluded that microfinance institutions in Telandana state were in the process of establishing sound risk management practices. The study additionally conclude that a positive relation existed between risk management practices of microfinance and variables of risk such as understanding risk and risk management, identification of risk, risk analysis and assessment and risk monitoring g and control. Furthermore, it also concluded that there was no association between number of years in operation of a microfinance institution in Telangana state and number of active borrowers and gross loan portfolio.

Wanjiku (2016) conducted a research on effect of financial risks on institutional efficiency. The study concludes that foreign currency, interest rate risk and credit risk, influenced institutional efficiency of companies listed in Nairobi Securities Exchange. Adopting financial risk quantified by foreign currency risk has positive or negative foreign currency risk or positive (negative) abnormal returns during results publication. The study also concluded that the coefficient for interest rate was 0.654, meaning that interest rate risk positively and significantly influenced the institutional efficiency of companies listed in Nairobi Securities Exchange. The study finally concluded that the coefficient liquidity risk size was 0.456, meaning that liquidity risk positively and significantly influenced the institutional efficiency.

Muteti (2014) did a research on how financial risk management commands financial performance of banks in Kenya. From the conclusions, it was revealed that there existed a negative relation between credit risk, foreign exchange, interest rate risk, liquidity risk and financial performance of 36 commercial banks in Kenya; thus the research concludes that financial performance of commercial banks in Kenya is negatively affected by credit risk, foreign exchange risk, interest rate risk and liquidity risk. The study also revealed that capital management risk, bank size and banks deposits positively affected financial performance of commercial banks in Kenya, and thus the

research concludes that there existed a positive relationship between capital management risk, bank size, bank deposits and financial production of commercial banks in Kenya.

Zubairi and Ahson (2015) investigated the strength of correlation between present risk management practices and the profitability of five (5) Islamic banks in Pakistan. Risk management practices of the banks were studied and quantified over a seven-year period. The study adopted both primary (survey questionnaires) and secondary data (annual reports) to collect data. The study estimated pooled regression and verified the reliability of the estimated model via the Augmented Dickey-Fuller test and found that risk management system had a statistically significant negative influence on profitability using ROA and ROE during the period under review. Frempong, Nartey and Korankye (2019) investigated the influence of risk management on organizational efficiency in Ghana, using Access Bank Ghana Ltd (UPSA Branch) aimed at understanding of risk management, knowing the potency of risk identification, risk assessment and analysis, risk monitoring and controlling with its impact on organizational efficiency. It was reported from the study that multiple linear regression showed that risk monitoring as an element of risk management had a positive relationship of 0.56 and significant predictor with organizational efficiency of ($\beta=0.733$, $t(15)=3.398$, $p<0.50$). The test for the fitness of the model was also positive and significant and the model was accepted. The study revealed a strong positive relationship between risk identification, understanding of risk and monitoring.

Methodological approach

The study focused on microfinance institutions operating in Ndian division and the industrial sectors. A simple random sampling was then used to select the specific respondents for the study. The research used workers and managers as respondents. The study was limited to the effects of financial risk management practices on finance performance of microfinance institutions in Ndian division. Ndian is a department of southwest region in Cameroon. It is located in the humid tropical rainforest zone about 650km south east of Yaounde. Ndian division was formed in 1975 from parts of Kumba and Victoria divisions and is one of six administrative units that constitute the southwest region. Its headquarters is in Mundemba and other major towns include Ekondo Titi, Bamusso, Isangele, Toko, Bekora and Dikome Balue. A total of nine municipalities (Bamusso, Dikome Balue, Ekondo Titi, Idabato, Isangele, Kumbo Abedimo, Kumbo itindi, Mundemba and Toko) make up the division. The population of Ndian division is estimated at 362201 of which 17% are semi-urban and 83% rural.

1. Population of the Study

Sample size refers to the number of people that are chosen from which the researcher wishes to gather information (Evans *et al.* 2000) [29]. Sample size refers to the number of elements to be included in the research (Malhotra & Bries, 2005). According to Ngechu (2014) [8], it is important to select a representative sample through making a sampling frame from the target population. In this study, the proportionate stratification was used which was based on the stratum's share of the total population to come up with the sample in each stratum. The actual microfinance institutions in which the questionnaires were distributed

were arrived at using simple random procedures to draw the sample from each stratum. The sample size for this study comprises of microfinance institutions in Ndian division. The researcher employed the Yamane (1967) formula to determine sample size as follows:

Where:

N = population size;

E = margin of error;

Sample size (n) = $\frac{N}{1+n(e^2)}$

N = 70

E = 0.5

Sample size = 50

2. Technique of Data Analysis

The raw data collected was edited to detect errors and omissions and to correct them where possible. Data collected was also coded into logical, descriptive, and meaningful categories to provide a framework for analysis. Descriptive statistics such as percentages to facilitate the change of raw data into a form that enabled understanding and interpretation in relation to the research questions were used. Data will be analyzed using the linear regression method because it will help us predict the value of the dependent variable based on the independent variables which in this case is financial performance and risk identification, risk control, risk monitoring and risk appraisal respectively.

3. Model Specification

Financial Performance = f (risk identification, risk monitoring, risk control, educational level of workers, longevity of workers). From the above function, we can specify our model as follows:

$$FP_i = \beta_0 + \beta_1 RI_i + \beta_2 RC_i + \beta_3 RM_i + \beta_4 EDU_i + \beta_5 LONG_i + \mu_i$$

Where:

FP_i = financial performance for individual MFIs;

RI_i = Risk identification by individual MFI;

RC_i = Risk control by individual MFI;

RM_i = Risk monitoring by individual MFI;

EDU_i = educational level of workers in individual MFI;

LONG_i = longevity of workers in individual MFI;

μ_i = Error term.

The study makes use of primary data which are costly and requires more time in collecting data unlike using secondary data. The other limitation of the study was that some of the respondents were reluctant to give information that they considered sensitive and confidential to their organization. However, as a mitigation strategy, the researcher assured respondents of data confidentiality by not obliging them to provide their identity on the collection instruments. The researcher also sought an introductory letter for data collection which was presented to the relevant respondents of questionnaires. However, despite the challenges, the study was able to get a response rate of 92%.

Results and analysis

1. Summary of Descriptive Statistics

A summary of the descriptive characteristics of the variables such as the mean, standard deviation, minimum, maximum values, are presented in the table below.

Table 1: Summary of Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Financial performance	42	2.285714	1.401841	0	4
Risk identification	42	1.190476	1.06469	0	3
Risk control	42	1.166667	.9606062	0	3
Risk monitoring	42	1.261905	1.03734	0	3
Level of education	42	1.785714	1.38873	0	4
Longevity of workers	42	1.095238	0.9320715	0	3

Source: Author, 2024

Table 1 above presents the summary of descriptive statistics of all the variables used in this study with the first being the financial performance of MFIs. It is observed that the mean value of MFI financial performance stands at 2.285714 with a standard deviation of 1.401841 and corresponding minimum and maximum values of 0 and 4 respectively where 0 represents a return of 0 - 5% and 4 represents a return of 20% and above. Again, the mean value of risk identification from the result is 1.190476 and this is accompanied by a standard deviation of 1.06469 indicating relatively low fluctuations in risk identification in MFIs in Ndiian Division. The minimum and maximum values of 0 and 3 respectively where 0 represents frequent practice of risk identification and 3 represents very rare practice of risk identification. Furthermore, the mean value of Risk control from the result is 1.166667 and this is accompanied by a standard deviation of 0.9606062 indicating relatively very low fluctuations in risk control in MFIs.

Table 2: Pairwise Correlation Analysis

Variable	Risk identification	Risk control	Risk monitoring	Level of education	Longevity of workers
Risk identification	1.0000				
Risk control	0.1298	1.0000			
Risk monitoring	0.4432	0.1063	1.0000		
Level of education	0.0590	-0.3509	-0.0586	1.0000	
Longevity of workers	0.5343	0.3716	0.1071	0.2977	1.0000

Source: Authors, 2024

From the correlation matrix, all the correlation coefficients along the diagonal are unitary indicating that each variable has a perfect positive correlation with itself. The table reveals that many of the independent variables are positively correlated and has a low multicollinearity values which are less than 0.8. Hence, there is no strong correlation between the variables. Therefore, it can be concluded that there is no strong relationship between the variables and hence the variables can be subjected to other empirical testing.

3. Test for Multicollinearity

VIF is used to test the existence of multicollinearity among the explanatory variables. A high variance inflation factor shows that there is the existence of multicollinearity among the explanatory variables while a low VIF shows that there is the absence of multicollinearity. The result is as presented on the table below.

Table 3: Variance Inflation Factor (VIF) result

Variable	VIF	1/VIF
Longevity of workers	2.27	0.441113
Risk identification	1.87	0.533336
Risk control	1.67	0.598682
Level of education	1.57	0.637183
Risk monitoring	1.30	0.766800
Mean VIF	1.74	

Source: Authors, 2024

The VIF results presented above reveals a mean VIF of 1.74 which is below the general accepted cut-off for VIF which is 2.5. Also, no individual VIF was found to be greater than 10. Thus the results of the regression are reliable and predictable. This means that our analyses are void of multicollinearity which validates the findings of this study.

4. Test of Reliability (Cronbach Alpha)

Table 4: Cronbach Alpha

Item	Obs	Sign	item-test correlation	item-rest correlation	average interitem covariance	alpha
Roa	42	+	0.9625	0.9402	1.074855	0.9797
Ri	42	+	0.9784	0.9695	1.193786	0.9741
Rc	42	+	0.9639	0.9508	1.248839	0.9772
Rm	42	+	0.9779	0.9690	1.205981	0.9745
Edu	42	+	0.9729	0.9568	1.069977	0.9775
Duration	42	+	0.9550	0.9394	1.266957	0.9786
Test scale					1.176732	0.9807

Source: Authors, 2024

The result reveals that risk control has a minimum value of 0 and maximum value of 3 where 0 represents frequent practice of risk identification and 3 represents very rare practice of risk control. The mean value of risk monitoring from the result is 1.261905 and this is accompanied by a standard deviation of 1.03734 indicating relatively very low fluctuations in risk monitoring in MFIs in Ndiian Division. Risk monitoring has a minimum value of 0 and a maximum value of 3 where 0 represents frequent practice of risk identification and 3 represents very rare practice of risk monitoring. More so, the mean value of the level of education of workers is 1.785714 and this is accompanied by a standard deviation of 1.38873. The level of education has a minimum and maximum values of 0 and 4 respective where 0 represents O/L while 4 represents Master's degree. Finally, the mean value of longevity of workers from the result is 1.095238 and this is accompanied by a standard deviation of 0.9320715. The longevity of workers has a minimum and maximum values of 0 and 3 respectively where 0 represents below 5 years and 3 represents 16 years and above.

2. Correlation Analysis

In correlation analysis we are interested in investigating the degree of the relationship existing between two or more variables and the value of the correlation coefficient ranges from -1 for a strong negative relationship to 1 for a strong positive relationship. The result of our correlation analysis is as presented on the table below.

Results indicate good internal consistency given that the overall value of Cronbach alpha (0.9807) > 0.7 which is greater than the bench mark of 0.7. So, these primary indicators have good internal consistency, thus can be used to form or build our index of variable.

5. Analysis of Variance

Table 5: Analysis of Variance

Source	Sum of Squares	df	Mean Sum of squares	F	Sig.
Regression	73.4957562	5	14.6991512	74.79	0.01
Residual	7.07567233	36	0.196546454		
Total	80.5714286	41			

Source: Authors, 2024

The results presented on Table 5 reveals that the financial performance of MFIs model is globally significant since the F-statistic i.e. F (4; 140) = 74.79 has a p-value of 0.0000

which is less than 0.05. The model equally has a fairly high predictive value since the R-squared and the adjusted R-squared statistics which are measures of the goodness of fit are above 30% and the root mean square of residuals is low given the nature of the data. In fact, the R- squared = 0.9122 which means that 91.22% of variation in the financial performance of MFIs are explained by the independent variables in the model. The results also reveal an interesting relationship of financial risk management and financial performance of MFIs which permit us to answer our research questions and reject the Null hypotheses formulated in the context of this study.

6. OLS Regression Analysis

In order to test the relationship between loan portfolio diversification and the performance of MFIs in the North west region of Cameroon, the OLS regression model was used. The result of the OLS regression analysis is presented on table 4.12 below.

Table 6: OLS Regression Analysis

Number of obs = 42 F(5, 36)= 74.79 Prob > F = 0.0000 R-squared = 0.9122 Adj R-squared = 0.9000 Root MSE = 0.44334						
Financial performance	Coef.	Std. Err.	t	P>t	[95% Conf. Interval]	
Risk identification	0.8630634***	.2806935	3.07	0.004	0.2937906	1.432336
Risk control	-0.0546813	.3040121	-0.18	0.858	-0.6712464	0.5618837
Risk monitoring	-0.1526679	.3159277	-0.48	0.632	-0.793399	0.4880632
Level of education	0.4661145***	.1611767	2.89	0.006	0.1392331	0.792996
Longevity of workers	-0.0004236	.292206	-0.00	0.999	-0.5930449	0.5921977
Constant term	0.6828216***	.1158983	5.89	0.000	0.4477691	0.9178742

Source: Authors, 2024

The table above presents the regression analysis on the relationship between financial risk management (risk identification, risk control and risk monitoring) and the financial performance of MFIs in Ndian Division. The result reveals the general result is significant given the F-statistics of 74.79 with a P-value of 0.0000. This shows that financial risk management has a statistically significant effect on the financial performance of MFIs in Ndian Division. The result reveals an R-square value of 0.122 indicating that 91.22% of variation in the financial performance of MFIs in Ndian Division is explained by variation in the independent variables. Specifically, the result revealed that. Risk identification has a coefficient of 0.8630634 indicating that risk identification has positive effect on the financial performance of MFIs in Ndian Division. This shows that a 1% increase in frequent identification of risk will increase the financial performance of MFIs in Ndian Division by approximately 86.3%. The coefficient is found to be significant at 1% level of significant since the P-value is less than 1%. Therefore, we reject the null hypothesis and conclude that risk identification has a significant effect on the financial performance of MFIs in Ndian Division. Risk control has a coefficient of -0.0546813 indicating that risk control has a negative effect on the financial performance of MFIs in Ndian Division. This shows that a 1% increase in frequent risk control will decrease the financial performance of MFIs in Ndian Division by approximately 5.5%. The coefficient is found to be statistically insignificant. Therefore, we fail to reject the null hypothesis and conclude that risk control does not have a significant effect on the financial performance of MFIs in Ndian Division. Risk monitoring has a coefficient of -0.1526679 indicating that risk monitoring has a negative

effect on the financial performance of MFIs in Ndian Division. This shows that a 1% increase in frequent risk monitoring will reduce the financial performance of MFIs by approximately 15.3%. The coefficient is found to be statistically insignificant since the P-value is more than 10%. Therefore, we fail to reject the null hypothesis and conclude that risk monitoring does not have a significant on the financial performance of MFIs in Ndian Division. The level of education of workers have a coefficient of 0.4661145 indicating that the level of education of workers has a positive effect on the financial performance of MFIs in Ndian Division. This show that a 1% increase the level of education of workers will increase the financial performance of MFIs in Ndian Division by approximately 46.6%. The coefficient is found to be statistically effect at 1% level of significant indicating that the level of education of workers has a significant effect on the financial performance of MFIs in Ndian Division. Longevity of workers has a coefficient of -0.0004236 indicating that the longevity of workers has a negative effect on the financial performance of MFIs in Ndian Division. This shows a 1% increase in the number of years workers stay in a particular position in MFIs in Ndian Division will reduce the financial performance of MFIs by approximately 0.04%. the coefficient is found to be statistically insignificant since the P-value is more than 10% indicating the duration of workers in MFIs in Ndian Division does not have a significant effect on the financial performance of MFIs. The constant term has a coefficient of 0.6828216 which is significant at 1% level of significant. This shows that if all the regressors are held constant, the performance of MFIs is likely to increase by approximately 68.3%.

7. Heteroskedasticity Test

White's test for H_0 : homoskedasticity

H_a : unrestricted heteroskedasticity

$\chi^2(20) = 25.27$

$\text{Prob} > \chi^2 = 0.1913$

Table 7: Cameron and Trivedi's Decomposition of IM-Test

Source	chi2	df	p
Heteroskedasticity	25.27	20	0.1913
Skewness	13.01	5	0.0233
Kurtosis	0.86	1	0.3529
Total	39.14	26	0.0472

Source: author

The assumption of the variance of the error term being constant (homoscedasticity) is tested on the basis of the white test and the statistical value of the p-value of 0.1913 is greater than 10% therefore, we fail to reject the null hypothesis and therefore conclude that there is the existence of homoscedasticity, hence, heteroscedasticity is not a problem in the model.

8. Discussion of Results

The study seeks to investigate the effect of financial risk management on the financial performance of MFIs in Ndian Division. Specifically looking at the effect of risk monitoring, risk identification and risk monitoring on the financial performance of MFIs in Ndian. The overall result revealed that financial risk management has a significant effect on the financial performance of MFIs in Ndian Division since the F-statistics f 74.79 had a P-value of 0.0000.

The first objective of the study was to investigate the effect of risk identification on the financial performance of MFIs in Ndian Division. The result of the findings revealed that risk identification has a positive effect on the financial performance of MFIs in Ndian Division. This shows that an increase in frequent risk identification will increase the financial performance of MFIs in Ndian Division. The result was found to be statistically significant indicating that risk identification has a significant effect on the financial performance of MFIs. Therefore, we reject the null hypothesis and conclude that risk identification has a significant effect on the financial performance of MFIs in Ndian Division. The result of the findings falls in line with the findings of Galema *et al.* (2018) who investigated the effect of risk identification across 1,335 MFIs worldwide and found that MFIs with more sophisticated market risk identification practices including interest rate risk monitoring and foreign exchange risk hedging have positive and significant effect on the financial performance of MFIs. The study also fall in line with the findings of Cull *et al.* (2011) who found that MFIs with formalized systems for identifying and mitigating operational risks have a positive and significant effect on the financial performance of MFIs. The second objective of the study was to examine the effect of risk control on the financial performance of MFIs in Ndian Division. The result of the findings revealed that risk control has a negative effect on the financial performance of MFIs in Ndian Division. This shows that if MFIs in Ndian Division increase their risk control practices it will reduce their financial performance. The result was found to be insignificant indicating that risk control does not have a significant effect on the financial performance of MFIs in

Ndian Division. Therefore, we fail to reject the null hypothesis and conclude that risk control does not have a significant effect on the financial performance of MFIs in Ndian Division. The result of the findings falls in line with the findings of Galema *et al.* (2018) who investigated the effect of risk identification across 1,335 MFIs worldwide and found that MFIs with more sophisticated market risk control practices including interest rate risk monitoring and foreign exchange risk hedging have positive and significant effect on the financial performance of MFIs. The study does not also fall in line with the findings of Cull *et al.* (2011) who found that MFIs with formalized systems for identifying, control and mitigating operational risks have a positive and significant effect on the financial performance of MFIs.

The last objective of the study was to examine the effect of risk monitoring on the financial performance of MFIs in Ndian Division. The result of the findings revealed that risk monitoring has a negative effect on the financial performance of MFIs in Ndian Division. This shows that an increase in frequent risk monitoring will lead to fall in the financial performance of MFIs in Ndian Division. The result was found to be insignificant indicating that risk monitoring does not have a significant effect on the financial performance of MFIs. Therefore, we fail to reject the null hypothesis and conclude that risk monitoring does not have a significant effect on the financial performance of MFIs. The result does not fall in line with the findings of Waweru and Spraakman (2012) ^[3] who found that risk monitoring has a positive effect on the financial performance of MFIs and the findings of Ahlin *et al.* (2011). Further studies by Gonzalez (2015) found that sophisticated risk monitoring capabilities have significant effect on the financial performance of MFIs.

Conclusion

1. Summary of Findings

The purpose of the study is to evaluate the effect of financial risk management on the financial performance of MFIs in Ndian Division. Specifically, the study seek to investigate the effect risk identification, risk control and risk monitoring on the financial performance of MFIs in Ndian Division. The study used descriptive statistics research design due to it appropriateness in presentation of specific state of affairs and description of the effect of financial risk management (risk identification, risk control and risk monitoring) on the financial performance of MFIs. The target population of the study was 50 employees selected from the 7 MFIs in Ndian Division. The study made use of primary data collected with the use of questionnaires that were administered to the 7 different MFIs in the Division. The data collected were coded in to SPSS version 25 for analysis. The first hand data was analyzed both descriptively and inferentially, the ordinary least square estimation technique was used to test the hypothesis of the study and the following results were recorded. Demographic result from the findings revealed that most of the respondents were the female population who fall within the age group 26-40 years and most of them have at least Higher National Diploma (HND). The result further revealed that most of the workers have been working for 6 – 10 years showing that they have a good mastery of financial risk management and it effect on the financial performance of MFIs.

The overall result of the findings revealed that financial risk management have a significant effect on the financial

performance of MFIs in Ndiian Division. The overall result also revealed that the variation in MFIs in Ndiian Division is highly explained by variation in the regressors used in the study. Specifically;

The first objective of the study was to investigate the effect of risk identification on the financial performance of MFIs in Ndiian Division. The result of the findings revealed that risk identification has a positive and significant effect on the financial performance of MFIs in Ndiian Division. The second objective of the study was to examine the effect of risk control on the financial performance of MFIs in Ndiian Division. The result revealed that risk control has a negative and insignificant effect on the financial performance of MFIs in Ndiian Division. The last objective of the study was to examine the effect of risk monitoring on the financial performance of MFIs in Ndiian Division and the result revealed risk monitoring on the financial performance of MFIs in Ndiian Division.

2. Conclusion

The objective of the study was to investigate the effect of financial risk management on the financial performance of MFIs in Ndiian Division. The overall result revealed that financial risk management have a significant effect of MFIs in Ndiian Division.

The result from the study revealed that risk identification has positive effect on the financial performance of MFIs in Ndiian Division. The result further revealed that risk identification has a significant effect on the financial performance of MFIs in Ndiian Division. Therefore, we reject the null hypothesis and conclude that risk identification has a significant effect on the financial performance of MFIs in Ndiian Division.

Risk control was found to have a negative effect on the financial performance of MFIs in Ndiian Division. The result further revealed that risk control does not have a significant effect on the financial performance of MFIs in Ndiian Division. Therefore, we fail to reject the null hypothesis and conclude that risk control does not have a significant effect on the financial performance of MFIs in Ndiian Division.

Risk monitoring was found to have a negative effect on the financial performance of MFIs in Ndiian Division. The result was to be insignificant. Therefore, we fail reject the null hypothesis and conclude that risk identification does have a significant effect on the financial performance of MFIs in Ndiian Division.

References

1. Addel-Meraf I. Credit Risk Management Practices in Microfinance: Evidence from Selected Microfinance Institutions in Togo. *International Journal of Science and Research*,2015:6(11):2198-2203.
2. Akerlof GA. The Market Lemons: Quality Uncertainty and the Market Mechanism. *Quarterly Journal of Economics*,1970:84(3):488-500.
3. Akinleye G, Olanipeku. Risk Management and Financial Performance. *Reviews*,2012:7(1):67-77.
4. Akkizidis I, Khandelwal SK. *Financial Risk Management for Private Hospitals and Finance*. Palgrave Macmillan,2008.
5. Allayannis G, James W. The use of Foreign Currency Derivatives and Firm Market Value. *Review of Financial Studies*,2001:14:243-276.
6. Al-Matari E, Al-Swidi A, Fadzil F. The Measurements of Firm Performance Dimensions. *Asian Journal of Finance and Accounting*,2014:6(1):24-29.
7. Bikker J. Bank Provisioning Behaviour & Pro-cyclicality. *Journal of International Financial Markets, Institutions and Money*,2015:141-157.
8. Bruhn M, Love. The Real Impact of Improved Access to Finance: Evidence from Mexico. *The Journal of Finance*,2014:69:1347-1376.
9. Carter D, Daniel R, Betty S. Does Fuel Hedging Make Economic Sense? The Case of the U. S Airline Industry. *Financial Management*,2006:35(1):52-86.
10. Cull R, Morduch J. Financial Performance and outreach: A Global Analysis of Leading Microbanks. *The Economic Journal*,2007:117:F107-F133.
11. Dhanini F. Fear is the Key: A Behavioural Guide to Underwriting Cycles. *10 Conn.Ins.L. J*,2007:255.
12. Geczy C, Minton BA, Schrand C. Why Firms use Derivatives. *The Journal of Finance*,1997:52(4):1323-1354.
13. Hartarska N, Parmeter CF, Nadolnyak D. Economics of Scope of Lending and Mobilizing Deposits in Microfinance Institutions: A Semi parametric analysis. *American Journal of Agricultural Economics*,2011:93:389-398.
14. Jensen MC, Meckling WH. Theory of the Firm: Managerial Behaviour, Agency Costs and Ownership Structure. *Journal of Financial Economics*,1976:3(4):304-360.
15. Jin Y, Jorion P. Firm Value and Hedging: Evidence from U.S Oil and Gas Producers. *The Journal of Finance*,2006:61(2):893-919.
16. Kenny AS, Jumoke O, Faderera OA. Risk Management Practices and Financial Performance: Evidence from Nigeria Deposit Money Banks (DMBs). *The Business and Management*,2014:5(4):1040-1056.
17. Khizer A, Muhammad FA, Sharma S. Financial and Non-Financial Business Risk Perspectives: Empirical Evidence from Commercial Banks. *Middle Eastern Finance and Economics*,2001:151-159.
18. Klimizazak FM. Corporate risk management from stakeholder's perspective. *TRANS*,2015:05:371-380.
19. Kombo A, Wesong J, Murumba N. An Evaluation of Impact of Risk Management Strategies on Micro Finance Sustainability; Acas of Selected MFIs in KISII Municipality. 2011.
20. Parrenas JC. Risk Monitory Procedure used by Commercial banks in Four Asian Emerging Market. 2005.
21. Sathyamoorthi CR, Mogosinyana M, Mphoeng M, Mashil D. Impact of financial risk management practices on financial performance. Evidence from commercial bank in Bolwana. *Applied finance and accounting*,2020:6(1):25-36.
22. Shieler B, Emenike K, Amu. Credit Risk management and Financial performance of Microfinance Institutions in Kampala, Uganda. *Journal of Banking and Finance Dynamics*,2017:1(10):29-2935.
23. Smith CW, Stulz RM. The determinants of firm Hedging policies. *Journal of finance and Quantitative Analysis*,1985:2(4):391-405.
24. Sparta J. Cash flow risk management practices and sustainable Performance. *Indust perbankan Dr jurnal liabilities*,2022:7(1):55-69.

25. Tanui JK, Wanyoike DM, Ngahu S. Assessment of Credit Risk Management Practices on Financial performance among Deposit Taking SACCOsin Nakuru East Sub Country Kenya. *International Journal in Management and Social Science*,2015;3(5):602-610.
26. Wagner C, Winler A. The vulnerability of Microfinance to Financial turn oil-Evidence from the global financial Crisi. *World Development*,2013:571-590.
27. Wamalwa MF, Mukanzi C. Influence of financial risk management practices of financial performance of commercial banks in Kenya, A case of banks in Kakamega. *strategic journal business and charge management*,2018;5(4):1040-1056.
28. Wanjiku N. Unpublished project on the effect on Institution Efficiency among Companies listed in Nairobi Security Exchange Nairobi. 2010 October.
29. Woolcock M, Narayan D. Social capital Implication for Development theory, research and policy. *The world bank research observer*,2000:15(2):225-249.
30. Zamore S, Beisland LA, Mersland R. Excessive focus on risk? Non-performing loans and efficiency of microfinance Institution. *International Journal of Finance and Economics*,2021:28:1-18